

**Attachment 3 – Detailed Scope of Work**  
**Construction of the New Franklin Park Storage Building**

General Contractor (GC) or the Sub-Contractor as designated by the GC is Responsible to:

1. Locate all underground utilities and their depth and location prior to start of work. All private utilities shall be traced and marked prior to any removal or demolition of work. A pre-demolition meeting shall be held with the Park Manager and the owner or the owner's representative once all utilities have been located, prior to any removal or re-routing of utilities and start of work.
2. Call Miss Utility and provide a final copy of the "ok'd" paper work to owner.
3. To provide temporary utilities on site, managing personnel on site, providing site surveying, disposing of construction waste, monitoring schedules and cash flows, and maintaining accurate records.
4. Employ engineering services to design the foundation, slab and wing walls for the pre-engineered building.
5. Verify all measurements as indicated on the approved site plan, architectural drawings (prepared by the owner), foundation wall drawings (prepared by the design engineer), and the erection drawings as designed and instructed by the manufacturer. The contractor to notify the owner, engineer, and the manufacturer with any discrepancies immediately.
6. Fence off the construction area with 6' temporary construction fence to prevent access during construction and after the close of the day.
7. Provide erosion and sediment control devices per approved site amendment plan (SPAM).
8. The GC to select a Pre-Engineered metal building manufacturer, which meets or exceeds the required qualifications as stated under the "Building Manufacturer and erector", and present the best fit and price based on the preliminary design drawings submitted. The selections and the price list shall be presented to owner for their approval prior to purchase. The metal building shall comply with or exceed the requirements under the heading "Design Requirement for the Metal Building".
9. The contractor is responsible to furnish all required materials, labors, equipment, and tools to perform all operations necessary to fabricate, erect and construct a prefabricated steel building, all primary and secondary structural framing members, bolted connections, roof and wall coverings, louvers, roll-up and swinging doors, flashings, fasteners, closures, sealers and other items as specified by the contract drawings, manufacturer's requirements, and specifications.
10. The contractor is responsible to order the pre-fabricated metal building and the building material at the earliest possible time to allow for preparation, submittal, and acceptance of the shop drawings by the owner and preparation of the foundation plan by the design engineer.
11. To manage a team of specialized, licensed and qualified sub-contractors.
12. It is the responsibility of the GC to ensure all fabricated materials meet the requirements of the accepted and approved shop drawings and they are true and straight. All materials shall be protected from damage during delivery, storage and installation.
13. Materials shall be installed in strict accordance with the manufacturer's instructions. Care shall be used in assembling to avoid bumping, twisting, dropping, or otherwise damaging the materials.
14. The contractor shall not remove any excess (unused) construction material from the site without the owner's approval. The owner shall be reimbursed for the unused construction material or keep the material onsite.
15. The general contractor is responsible to keep a clean and safe construction area at the end of each work day.

**Required Permits:**

The contractor is responsible to obtain information from the regulatory agencies in Loudoun County for all and any other required permits not listed below. A copy of the required permits shall be submitted to the owner within 24 hours of obtaining such permits.

1. Site permit and zoning, by owner; fees are waived by Loudoun County Department of Building and Development.
2. Code modification/waiver for the second bathroom requirement by IPC, by owner.
3. Building Permit/s, including the demolition of the building, and foundation wall are the General contractor's responsibility; fees are waived by Loudoun County Department of Building and Development.
4. Building permit to re-build the pre-engineered building, the foundation, and the wing walls are the responsibility of the GC; Fees are waived by the Loudoun County Department of Building and Development.
5. Electrical permit and plans (if required by Building Development), is the contractor's responsibility, fees are waived by the Loudoun County Department of Building and Development.
6. Mechanical permit and plans (if required by Building Development), contractor's responsibility, fees are waived by the Loudoun County Department of Building and Development.
7. Plumbing permit and plan (if required by Building Development), contractor's responsibility, fees are waived by the Loudoun County Department of Building and Development.
8. Health department approval, well and septic connections, contractor's responsibility, fees are waived. Contractor is required to check with the department to obtain information on the required plans and permits, if any.

#### Submittals:

1. Submit a construction schedule and the sequence of work to the owner; please note the county holiday schedule when preparing the construction schedule. Once approved, any change to the schedule shall be approved in advance by the owner.
2. Provide the list of professionals and the subcontractor's, once selected, to the owner.
3. Submit the Architectural plans as part of the plan submittal; Prepared by the owner.
4. Complete sets of instructions for field procedures for erection and adjustment prior to construction to the owner.
5. The manufacturer shall supply the contractor with Pre-engineered shop drawings; the said drawings shall show the dimensions, complete erection drawings with the proper identification and assemblage of the building component, all relevant details, along with the calculations booklet sealed and signed by an engineer registered in the Commonwealth of VA. Owner's approval is required prior to any submittal to the county or the design engineer. A copy of the said material shall be provided to the owner.
6. The manufacturer's shop drawings shall include the,
  - Product data and samples (6" long x 24" width) on all building skin and roof systems, window systems, and doors shall be approved by the owner prior to ordering. **A copy of the product data and samples, as required, to be submitted to the owner.**
  - Product data and samples (6" long x 24" width), on all color and material samples of all finished surfaces including the interior and exterior materials shall be approved by the owner prior to ordering. **A copy of the product data and samples, as required, shall be submitted to the owner.**
7. Submittal of the calculation's booklets and shop drawings, from the manufacturer of the pre-fabricated buildings, to the pre-listed structural engineer for the design of the foundation, slab and foundation wing wall/s. Owner's approval is required prior to submission to engineer. **A copy of all calculations, plans, and shop drawings shall be submitted to the owner.**
8. Structural foundation drawings and calculations shall include the foundation design based on the reactions submitted by the manufacturer, slab and reinforcement design, anchor bolt, base plates, the lift slab, and the foundation wing wall/s design along with all pertinent details, and

shall be sealed and signed by the design engineer registered in the Commonwealth of VA. These plans shall be submitted along with Architectural plans, prepared by the owner, and the sealed and signed manufacturer's erection drawings and calculations plans, the electrical plans signed by licensed electrician or certified as directed by the Building and Land Development, mechanical plans signed by licensed mechanical contractor or certified as directed by the Building and Land Development, and the plumbing plans signed by licensed plumbing contractor or certified as directed by the Building and Land Development, to the Loudoun County Department of Land and Building Development to obtain the building permit by GC. **It is the responsibility of the engineer of the record to verify that the loading criteria defined on the order document is adequate and modify as needed.**

9. The floor slab shall be placed over properly compacted subgrade with required thickness of gravel base with Poly Vapor Barrier and perimeter insulation as shown on the plans. The surface of the slab shall be sloped to drain outward at the bay garage doors.
10. Provide rigid insulation under the slab 2'-0" wide minimum to meet the minimum R-10 insulation value.
11. The thickness of the storage slab and the location of the control joints shall be per engineer's approved drawings.
12. The finished surface of the slab shall be hard, smooth, skid resistant concrete on areas that are not to be covered.
13. A portion of the slab labeled as "Lift area" is to be designed as a heavy duty reinforced concrete slab suitable for industrial use is required (shown on the building plans as the "lift area"). The slab shall be designed to support the weight of the lift plus 12,000 lb. the lift is supported at four (4) points. Each leg of the lift is welded to a, provided, 4"x6" plates and to be attached to slab with 2 bolts. The exact dimensions and the full weight shall be furnished to the contractor and engineer prior to preparation of the design.

**Note: MEP plans and permit, except for Plumbing Ground work, may be submitted to Loudoun County at a later time, if permitted by Building Development Department. GC or contractor to allow time to obtain all permits.**

14. Drawings on all electrical systems including light fixtures, electrical panel board, wiring, transformers, and circuiting, grounding, exhaust fans, powered roof fans and Carbon monoxide exhaust systems shall be prepared and signed by a licensed electrical contractor or certified as required by the Building Development. **Prior owner's approval is required.**
15. Drawings on all Mechanical systems, HVAC system, and ventilation system shall be prepared and signed by a licensed mechanical contractor or certified as required by the Building Development. **Prior owner's approval is required.**
16. Drawings on all plumbing systems, riser diagrams, pipe connections and sizes, materials and fixtures color and specifications shall be prepared and signed by a licensed plumbing contractor or certified as required by the Building Development. **Prior owner's approval is required.**
17. **Coordinate all MEP plans with the Architectural and manufacturer's plans.**

**Site Work:**

All site/grading and erosion and sediment control device placement shall be in accordance with the approved lot grading plans, and all applicable codes adopted and enforced by Loudoun County.

**Clearing & Grubbing:**

All vegetation and debris within the limits of construction, except as designated to remain, shall be cleared, grubbed, removed, and disposed of. All vegetation and objects to remain shall be protected.

**Demolition:**

Demolish and remove the entire existing barn building including the concrete slab, the existing foundation wall and footings, if any.

Support the cut, if necessary to avoid slope failures. Any damage to the slope and the cut is the responsibility of the contractor.

**Construction Debris:**

All construction debris may be placed in containers and removed from the site. The dump fees are waived on county projects.

**Construction Equipment:**

1. All construction equipments shall be secured locked and grounded after each work day.
2. Provide the Project Manager with a list of all construction equipment that remain on site at each construction stage.

**Foundation and wing Walls:**

1. The foundation and wing walls shall be constructed per the approved engineered drawing/s.
2. The walls shall be designed to support the lateral earth pressure from the soil and the surcharge from the new parking lot and driveway along the length of the walls (depending on the location of the walls). The wall shall also support all reactions from the steel frames supplied by the steel manufacturer.
3. Provide water proofing behind the foundation and foundation wing walls.
4. Provide minimum 12" of gravel behind the walls.
5. Provide daintile along the length of the walls, day light the ends to proper designated drainage areas away from the building.
6. Provide guardrail to the height and at locations as required by IBC 2009 and approved plans.

**Guardrail**

1. Guardrail shall be provided, on top of the wall where there is an elevation difference of greater 30".
2. The guardrail height shall be 42" minimum.
3. The guardrail shall be made of pressure treated, SYP #2 or better.
4. The posts shall be 6x6 pressure treated @ 5'-0" o.c maximum.
5. The top rail shall be 2x6 minimum applied flat, SYP #1 or better. The edges of the top rail shall be rounded and smooth without splinters.
6. The top surface shall be smooth and without checks and splinters.
7. The balusters shall be 2x2 pressure treated at 4" O.C. maximum.
8. The side rails shall be 2x4, applied flat, pressure treated #2 minimum.
9. All connections shall be stainless steel or hot dipped galvanized except for 1/2" or larger bolts.

**Applicable Codes and Standards:**

1. The building and its components shall comply with USBC 2009, and all referenced codes and standards as amended.
2. All Concrete work shall comply with latest applicable, adopted and referenced ACI 350 code.
3. All Masonry work shall comply with latest applicable, adopted and referenced ACI 530 code.

4. All Steel work shall comply with latest applicable, adopted and referenced AISC code, 13<sup>th</sup> edition, ASD method.
5. Cold-Formed steel structural members shall be designed in accordance with the latest edition of AISI "Specifications for the Design of Cold-Formed Steel Structural Members".
6. All interior cold formed galvanized steel frame work shall be in accordance with AISI-NAS.

**Design Requirements for the Prefabricated Steel Building:**

**Design shall be based on Allowable Stress Design (ASD) and shall comply with the following minimum design requirement. These values may be changed by the engineer of the record only.**

1. Design Codes:

Design shall be in accordance with USBC 2009, and all referenced material codes (ACI, NDS, ACI-530, AISC, AISI, etc.), and shall comply with all applicable local amendments, if any.

- All structural steel sections and welded plate members shall be designed in accordance with the latest edition of the AISC, "Specification for the Design, Fabrication, and Erection of Steel for Buildings" and IBC.

2. Dead Loads:

The dead load shall be the weight of the Metal Building System and as determined by the system manufacturer.

3. Collateral Loads:

The collateral load shall be **10 psf** or as shown on the contract drawings. Collateral Loads shall not be applied to the roof panels.

4. Live Loads:

➤ Roof Live Load:

The building system shall be capable of supporting a minimum uniform live load of **30 psf**, non-reducible. The live load shall be applied to the horizontal roof projection.

➤ Floor Live Load:

The building concrete slab shall be capable of supporting a minimum uniform live load of **100 psf**.

5. Snow Loads:

The design ground snow load shall be **30 psf** non-reducible.

6. Importance Factors:

$I_s = 1.00$  &  $I_w = 1.00$

7. Wind Loads:

- The design wind speed for the metal building system shall be based on **90 mph, 3 second gust**, exposure "**C**".

- All interior walls shall be metal studs galvanized **G60** minimum or better and be designed for **5 PSF** lateral load.

8. Seismic Loads:  
Seismic load shall be determined based upon a response acceleration factors  $S_s=0.164$ ,  
 $S_1= 0.052$   
Seismic Design Category "C"  
Seismic Site Class "D"
9. Rainfall Intensity:  
All exterior gutters and downspouts shall be designed in accordance with the provisions of the code having jurisdictions.
10. Deflections shall be limited as follows:  
The Live load Deflection of the primary and the secondary members shall be per latest applicable ASCE7 standard.  
Roof Members Not supporting Ceiling       $l/240$ .  
Roof Members supporting plaster ceiling       $l/360$ .  
Exterior Walls and Interior partitions       $l/240$
11. Code Analysis:  
Occupancy Category is designated as II  
Use Group "S-1".  
Type of Construction "IIB"  
Occupancy load (Reduced) to 15 (total) per waiver approved by Loudoun County Building Development Dated, November 16, 2012. A copy of approval is attached.
12. Thermal Effects:  
➤ Standing Seam roof panels shall be free to move in response to the expansion and contraction forces resulting from a temperature variation.  
➤ The building is cold and not insulated, except for the office areas as shown on the drawings.  
➤ Assembly to permit movement of components without buckling, failure of joint seals, and undue stress on fasteners; insulation shall be provide to underside of the roof to prevent excessive expansion and contraction.
13. Site Conditions:  
The following site features and adjacent structures must be considered in the design.  
The building will be adjacent to a hill, approximate drop in elevation 5' to 6'. There are few trees in the back of the building. The closest building to the new structure is about 50' away.

**Storage building:**

The Storage building is separated into three areas; a 54'x28' a 70'x53' and 55'x17' areas. The total area of the building is calculated to be 6157 sq. ft.

**The building will house a very small amount of Hazardous materials; however, the amount is well below the limits set for "H" use group and specified in IBC table 307.1 (1). A full listing of these materials may be provided to the contractor upon request. The owner is responsible to provide an adequate and NFPA approved storage area to store these materials.**

### Shop Coating:

1. Galvanized Structural Framing,  
All structural framing members and all other steel accessories that are galvanized and chemically treated for paint adherence and which are not factory color coated shall receive one (1) coat of Galvanized Metal Primer conforming to Federal Specification TT-P-641b, Type II, or equivalent, then painted with two (2) coats of Industrial Enamel within forty eight (48) hours after the prime coat is applied.
2. Structural Framing Not Galvanized,  
All structural framing members and miscellaneous steel accessories which are not galvanized shall be cleaned to remove all dirt, grease, oil, and loose mill scale, given one (1) shop coat of zinc chromate iron oxide primer conforming to Federal Specification TT-P-636b, and field painted, prior to erection, with two (2) coats of Industrial Enamel approved by the District.
3. Exposed Galvanized Surfaces.  
All roof and wall panels, flashing, trim, and other exposed galvanized steel surfaces shall be factory color coated with a twenty (20) year guarantee.
4. Ventilators, Louvers and Doors,  
Any required ventilators, louvers, and doors shall first receive one (1) coat of Galvanized Metal Primer, then be factory color coated with two (2) coats of Industrial Enamel as manufactured by Ditzler, DuPont, Pittsburgh Paints, or approved equal, within forty eight (48) hours after the prime coat is applied.
5. Color and Paint Schedule,  
All colors for all finish painted surfaces shall be per owner's approval unless otherwise specified.

### Warranty:

1. Building manufacturer shall provide manufacturer's standard material warranty in writing and present to owner.
2. Metal building contractor shall provide a workmanship warranty for a minimum period of 20 years in writing and present to owner.

### Building details:

1. The building is a combination of Gable Symmetrical continuous frame building (roof ridge at the center) and a mono-slope Gable frame building with straight roof rafters and straight columns without center or intermediate supports.
2. **The length of the overhang depends on the cost; required overhang between 2' minimum and 4' maximum.**
3. **(Option A)** Provide roof extension 19' (17' of roof and 2' of overhang minimum.), as part of the prefabricated steel building, over the Art Center storage area. Maintain the slope from the interior support to the exterior wall.  
**(Option B)** As a cost saving option, the Art Center storage area may be designed as part of the steel framed building with an interior support system to be provided on the wall between the Art Center Storage area, if needed, and the Main Storage area.
4. The building width and length shall be measured from outside to outside face of the sidewall girts.
5. The eave height shall be measured from the bottom of the base channel to the intersection of the lines representing the inside of wall covering and the roof covering.
6. **Clear wall height** shall be 16'-0" minimum.
7. The building shall be water and weather tight.
8. The building frame shall be plumb and in-line to the specified spacing by the manufacturer's drawing.
9. Purlins and girts shall be plumb and to the spacing specified by the manufacturer's specification.

10. Shall have adequate ridge vents, soffit vents, and mechanical roof vents (powered), to allow for proper air circulation and air exchange.

**Connections:**

The frame erection and all connections shall be in complete accordance with the Manufacturer's drawings and specifications. It is the responsibility of the erector to replace or repair any damaged connection per manufacturer's or the engineer's recommendation.

1. All connections shall be zinc coated steel with a zinc chromate finish except for anchor bolts and exposed sheet metal screws. Exposed sheet metal screws shall be stainless steel.
2. All shop connections shall be by welding in accordance with the AWS "Standard Code for Welding in Building Construction" the welders and the welder operators shall have been pre qualified and certified as required in the code.
3. All field connections shall be bolted. The bolts shall be machine bolts conforming to latest ASTM Specification A-307 for all secondary framing members, and ASTM Specification A-325 for bearing frame end walls and for main frame connections and as shown on the drawings.

**Primary Framing Members:**

All framing members shall be shop fabricated for field assembly. The steel sections shall conform to requirements of ASTM A36. All framing members shall carry an easily visible identifying mark, stamped, stenciled or painted to facilitate erection.

1. All primary rigid frames shall be welded built-up "I" or hot rolled sections.
2. The columns and the rafters may be straight.
3. All base plate splice and flanges shall be shop fabricated to include bolt connection holes. Webs shall be shop fabricated to include bracing holes.
4. The connections for purlins and girts shall be by means of welded clips. Refer to manufacturer's drawings for location.
5. The roof erection shall be in complete accordance with the manufacturer's Erection Manual. Any deviation from this manual that results in roof damage is the responsibility of the erector to replace and/or repair the damage per manufacturer's specification or engineer's recommendation.

**Base Support:**

1. A continuous member shall be provided to support and attach the base of the wall covering. The base support shall be galvanized base channel attached to concrete floor with hooked anchor bolts. Close all gaps between the base support and concrete with appropriate material to prevent any air and water penetration.
2. The base support shall be minimum of 6" above the finished grade.

**Secondary Framing Members:**

1. Purlins and Girts shall be cold formed "Z" sections with stiffened flanges.
2. Diagonal bracing may be used in the roof, sidewalls and gable walls.

**Roof and Wall Covering Materials:**

1. All sidewall panel lengths shall be continuous from sill to eave line.
2. Extend the wall covering 2" beyond the base angle and provide base trim and flashing.
3. All end wall panels shall be beveled cut in the field by the erector.
4. The wall panels shall be pre-painted finish Galvalume steel panels 24 gauge, conforming to ASTM 792.
5. The wall covering and color to match the existing "Art center's" exterior wall covering or as directed by the owner; **Prior owner's approval is required.** The walls are not insulated unless



noted otherwise on the plans. **The owner is requesting a quote for insulated walls after contract award.**

6. The roof covering shall be standing seam roof panels. Insulated to prevent excessive expansion and contraction due to temperature changes.
7. The standing seam roof panels shall be UL-90 rated, roll-formed, 24 gauge pre-painted Galvalume with minimum yield of 50 Ksi. All Galvalume panels shall conform to requirements of ASTM-792. **Prior owner's approval is required.**
8. The panel size and the height of the seams shall resemble the existing "Art Center" roof or as directed by the owner; **Prior owner's approval is required.**
9. All panels shall be factory cut at both ends. The panel installation shall start from one end and finish at the other.
10. Steel ridge cap shall be minimum 26 gauge galvanized steel, factory color coated, to match the roof panels and shall be provided along the roof ridge.
11. Provide Adhesion Mounting snow and ice guards throughout the length of the roof.

#### **Framed Openings:**

All framed openings shall be adequate to support all design loads and specified deflections and shall be fully trimmed and flashed. All framing members exposed to weather shall be galvanized steel.

#### **Sealant and Closures:**

1. The corrugations of the roof and wall panels shall be filled with pre-formed rubber, neoprene or Polyethylene closures along the eave, ridge rake and base.
2. All gutter and downspout joints, ridge flashing laps, doors, windows and louvers shall be sealed with color to match trim (as approved by owner), Butyl rubber base caulk.

#### **Gutters and Downspouts :**

1. Eave gutters shall be roll-formed, free of waviness and any imperfections. All gutter sections shall be securely fastened and sealed at end laps. The outside face of the gutter shall be 26 gauge minimum thickness factory painted GALVALUME with supports at every 24" O.C.
2. Downspouts shall be 4" x 4" roll formed box sections. Use matching straps to secure the downspouts to the building wall. Kickouts shall be provided on each downspout.
3. The downspouts shall drain to an approved drainage area.
4. The minimum spacing of downspouts shall be 25' or as recommended by the engineer.

#### **Flashing and Trim:**

1. Flashing and/or trim shall be provided at the rake, corners, eaves, framed openings, and wherever necessary to provide weather and water tightness and a finished appearance.
2. All flashing shall be manufactured from pre-painted Galvalume steel.
3. All trims shall be pre-painted Galvalume, color to be selected by the owner, 24 gauge or vinyl.

#### **Light gauge cold formed members:**

1. The design of cold formed steel members shall be in accordance with appropriate AISI sections and shall also comply with IBC 2009, section 2210.
2. All cold formed interior wall shall be designed for a minimum 5 psf lateral loads in addition to all Cold formed other applicable loads.
3. steel framing members shall have a legible label with the following minimum information;
  - Manufacturer's identification
  - Minimum base steel thickness
  - Minimum coating designation
  - Minimum yield strength

4. Cold formed steel shall have a metallic coating complying with ASTM A 1003 and Minimum of G60 in accordance with ASTM A653.
5. The cold formed steel framed wall shall be anchored to slab or foundation.
6. The cold formed steel members shall be connected per engineered drawings.
7. All cold formed sections shall be manufactured by precision
8. All members shall be straight and free of any defects.
9. **Do not proceed with manufacturing prior to review of shop drawings**
10. Submit samples 6" long x full panel width showing the metal gauge and panel profile.
11. The panel manufacturer shall have a minimum 10 years of experience in manufacturing roofing.
12. The installer shall have a minimum of 5 years experience in installation of metal roofing in similar size and scope.
13. The panels and flashing shall be protected and properly packaged to prevent any damage during the transportation.
14. Store panels and flashing in a dry and safe environment.
15. All dimensions shall be verified prior to fabrication.
16. All panels shall be 24 gauge structural steel.
17. The panels shall be smooth, the final finish shall be per owner's requirement.
18. Any request for alternate system shall be submitted to project manager in writing at least 10 days prior to ordering the materials.
19. All screws shall be plated steel or stainless steel. They shall have a combination EPDM gasket and painted flange to match the color of the roofing.
20. The flashing shall be shop fabricated from a material that is a same thickness and finish as the corrugated panels.
21. Dispose of debris from jobsite.
22. All extra materials shall be transferred to the owner if the owner request it.

#### **Painting:**

1. All uncoated structural steel shall be cleaned of all foreign matter and loose scale in accordance with SSPC-2 and given a one mil coat of red oxide primer. The primer shall meet or exceed the performance requirements of Federal Specifications TT-P-636.
2. All roof and wall panels, flashing, trim, and other exposed galvanized steel surfaces shall be factory color coated with 20 year warranty.
3. Furnish primer for touch-up or field painting.
4. The base metal shall be pre-treated and then primed with epoxy type primer for adhesion and corrosion.
5. All structural framings which are not galvanized, their Surfaces shall be clean and dry free of dirt, grease, oil, wax, mildew, loose paint, rust and mill scale. The rusty metal surfaces should be sandblasted or treated, before priming with one shop coat of zinc chromate iron oxide primer, meeting the Federal Specification TT-P-636.

#### **Windows:**

1. Frames and doors shall be installed in accordance with plans and shop drawings in a rigid, substantial manner and shall be weather tight, waterproof, square, plumb and level.
2. All windows double hung, polished aluminum finish, 3'-0"x5'-0", color to match the trim and as approved by the owner. The glazing to be double insulated sealed glass. All windows shall be furnished complete with hardware, and full screen. Windows shall be self flashing to wall panels. Window locations are as shown on the conceptual plans.

#### **Personnel Doors:**

1. Frames and doors shall be installed in accordance with plans and shop drawings in a rigid, substantial manner and shall be waterproof, weather tight, square, plumb and level.

2. All personnel doors shall be flush type, 3'-0" x 7'-0" x 1 3/4" solid core steel door with no more than 3/32" clearance from frames. Manufactured from 2 formed steel cover sheets, 20 gauge thick, and reinforced with 20 gauge steel channels. The top and bottom edges of doors shall be closed and reinforced with steel channel members extended full door width and welded full width.
3. Each door unit shall be furnished with 1/2" high extruded aluminum threshold with sweep strip and necessary fasteners.
4. All locksets shall be provided by the owner and shall be ADA approved.

#### **Garage Doors:**

1. Frames and doors shall be installed in accordance with plans and shop drawings in a rigid, substantial manner and shall be water tight, weatherproof, square, plumb and level.
2. Curtains shall be galvanized steel and prime coated. The curtain shall be equipped with a full length steel angle, securely fastened to the bottom of the curtain.
3. The guides shall be roll-formed of 13 gauge galvanized steel. Provide heavy nap stripping to allow for rattle-free operations and to provide dust and weatherproofing.
4. All garage doors shall be 12'-0" tall x 12'-0" wide steel door roll up power operated.
5. All parts shall be given a factory applied rust inhibitive prime coat of paint. All scratches on the primed surfaces shall be touched up after erection.
6. Door shall be electronically operated with manual override.

#### **Interior Features:**

1. The interior ceiling over the staff room # "101", staff room # "102", Storage room # "103", and the handicapped unisex bathroom shall be covered with corrugated metal roofing.
2. Provide interior covered ceiling with 1/2" gypsum board under the ceiling for room 101, 102, and 103 and also in the handicapped bathroom ceiling.
3. The clear finished ceiling height, in all finished areas, shall be 10'-0" minimum.
4. All walls to be covered with dry wall and per approved architectural plans. Prepare drywalls and paint all walls per approved color by owner.
5. 1/2" gypsum board to be applied to both sides of the metal studs.

#### **Interior Roof Ceiling Covering**

1. Provide factory formed, unfinished and Lapp able corrugated metal roof. With 1" overhang.
2. Submit manufacturer's specifications, standard profile sheet and product data sheets/brochure to owners prior to ordering.
3. Provide shop drawings showing the roof plan and material type, and metal thickness. The drawing shall distinguish between field and factory fabrication.

#### **Bathroom:**

1. All walls studs shall be 6" cold formed steel. Insulated R-30 minimum except as noted otherwise.
2. All ceiling shall be designed as specified on the approved drawings, with R-11 minimum value.
3. Provide a unisex ADA accessible bathroom with sink (hot and cold water) and toilet. Reinforce the wall behind the grab bars as required and as shown.
4. Provide VCT (Vinyl Composition Tile) tiles on to cover the bathroom floors.
5. Provide rolled VCT wall protection 4'-0" above the finished floor all around.
6. Provide VCT base molding 4" high from the finished floor on the perimeter walls.
7. All outlets in the bathroom shall be GFI.
8. Connection to septic system is required; length is as shown on the approved SPAM.

9. Connection to water line is required; length as specified on the approved SPAM.
10. Provide commercial grade stainless steel toilet accessories including paper and towel dispensers, and soap dispenser.
11. Attach all bathroom accessories per ADA requirements.

**Storage Area Room # 103:**

1. All walls shall be 6" cold formed steel. Insulated R-30 minimum except as noted otherwise.
2. All ceiling shall be designed as specified on the approved drawings, with R-11 insulation minimum.
3. Provide an ADA accessible shower cabinet (hot and cold) in the locker room approximate area 3'x3'.
4. All outlets in the locker room shall be GFI.
5. Provide VCT (Vinyl Composition Tile) flooring.
6. Provide VCT base molding 4" high from the finished floor on the perimeter walls.

**Staff Area Room # 102:**

1. All walls shall be 6" cold formed steel, insulated with minimum R-30 value.
2. All ceiling shall be designed as specified on the approved drawings, with R-11 insulation minimum value.
3. Provide a stainless steel commercial grade sink with hot and cold water.
4. Provide hardtop countertop next to the sink and fridge total length as specified on the plans.
5. Provide wall mounted cabinets and floor mounted cabinets with drawers.
6. All outlets on the kitchen wall and over the countertop/s shall be GFI.
7. Provide VCT (Vinyl Composition Tile) flooring.
8. Provide VCT base molding 4" high from the finished floor on the perimeter walls.

**Miscellaneous:**

1. Provide mop sink, hot and cold water.
2. Apply VCT wall covering behind the mop sink and on the side walls minimum 4'-0" high from the finished floor up.
3. Provide bottled water in lieu of the water fountain requirements.
4. The interior of the building, except for the finished areas shall remain unheated.
5. Provide a tank less electric water heater; Location per approved plans.
6. Provide overhead light fixtures to the interior of the building to fully illuminate the areas throughout; the ballasts for the lights shall be cold weather rated.
7. Provide exit lights with battery operated powers at the exit doors.
8. All interior doors 3'-0" x 7'-0" steel doors, door handles and lockset will be provided by the owner.

**Electrical:**

All Electrical work, as specified in the scope of work and the drawings, shall meet or exceed the National Electric Code (NEC) requirements, as referenced and adopted by USBC.

1. Provide floor mounted stainless steel or PVC mop sink.
2. Provide 4' minimum above the finished floor VCT rolled wall covering, on two sides extending 2' away from the sink edges on either side.
3. Provide eye (hot and cold) wash with flexible hose next to the mop sink.
4. Provide illuminated exit signs equipped with battery backup over all exit doors as shown on the drawings.
5. Provide wall mounted emergency motion detector lights on the exterior walls. Locations as shown on the approved plans.

6. Provide 4 way switch at the entrance door as specified on the drawings.
7. Provide keyless keypads, with possibility for future upgrade to keyless card reader, at the garage doors and the entrance doors.
8. Provide special equipment switch as specified on the plans.

**Mechanical:**

All Mechanical work, as specified in the scope of work and the drawings, shall meet or exceed the International Mechanical Code (IMC) as referenced and adopted by USBC.

**Insulation:**

The building envelope, where insulation is required, under the slab (heated or unheated), interior walls (as specified on the drawings), roof and ceiling (as specified on the drawings) shall meet or exceed the requirements in Energy Conservation Code as referenced and adopted by USBC.

**Plumbing:**

All Plumbing work shall meet or exceed the International Plumbing Code (IPC) as referenced and adopted by USBC.

**Inspection:**

1. Clear site of all debris and hazardous material.
2. Finish the final site grading
3. The asphalt pavement work depends on the available budget.

**Site Cleanup:**

- Clear site of all debris and hazardous material.
- Finish the final site grading